

handled in a way to minimize risks of unintentional or unauthorized access or use. Risk can be minimized by limiting the collection of data and deleting data once it is no longer needed. In addition, and when applicable, including in certain health related applications, data de-identification can be used to protect a user's privacy. De-identification may be facilitated, when appropriate, by removing specific identifiers (e.g., date of birth, etc.), controlling the amount or specificity of data stored (e.g., collecting location data a city level rather than at an address level), controlling how data is stored (e.g., aggregating data across users), and/or other methods.

**[0122]** Therefore, although the present disclosure broadly covers use of personal information data to implement one or more various disclosed embodiments, the present disclosure also contemplates that the various embodiments can also be implemented without the need for accessing such personal information data. That is, the various embodiments of the present technology are not rendered inoperable due to the lack of all or a portion of such personal information data. For example, display images based on non-personal information data or a bare minimum amount of personal information, such as the content being requested by the device associated with a user, other non-personal information available to the display system, or publicly available information.

**[0123]** The foregoing is merely illustrative and various modifications can be made to the described embodiments. The foregoing embodiments may be implemented individually or in any combination.

What is claimed is:

1. An optical system configured to receive image light from a display module and configured to redirect the image light onto an eye box, the optical system comprising:

first hologram structures; and

second hologram structures overlapping the first hologram structures, wherein the first hologram structures are configured to receive the image light at an angle external to a volume between the first and second hologram structures, the first hologram structures are configured to replicate the image light onto the second hologram structures, and the second hologram structures are configured to focus the replicated image light onto the eye box.

2. The optical system defined in claim 1, wherein the first hologram structures comprise transmission hologram structures.

3. The optical system defined in claim 2, wherein the second hologram structures comprise reflection hologram structures.

4. The optical system defined in claim 3, wherein the transmission hologram structures comprise point-to-plane-wave transmission holograms and wherein the reflection hologram structures comprise plane-wave-to-point reflection holograms.

5. The optical system defined in claim 3, wherein the transmission hologram structures comprise plane-wave-to-plane-wave transmission holograms and wherein the reflection hologram structures comprise plane-wave-to-point reflection holograms.

6. The optical system defined in claim 3, wherein the transmission hologram structures comprise point-to-nearly-plane-wave transmission holograms and wherein the reflection hologram structures comprise nearly-plane-wave-to-point reflection holograms.

7. The optical system defined in claim 3, wherein the transmission hologram structures comprise a first transmission hologram configured to diffract the image light from a first incident angle at a first output angle towards the reflection hologram structures, and wherein the transmission hologram structures comprise a second transmission hologram configured to diffract the image light from the first incident angle at a second output angle towards the reflection hologram structures.

8. The optical system defined in claim 7, wherein the first transmission hologram is configured to diffract the image light from a second incident angle at the first output angle towards the reflection hologram structures, wherein the second transmission hologram is configured to diffract the image light from the second incident angle at the second output angle towards the reflection hologram structures, wherein the reflection hologram structures comprise a first region having a first reflection hologram configured to diffract the light that was diffracted by the first transmission hologram at a third output angle towards the eye box and a second reflection hologram configured to diffract the light that was diffracted by the second transmission hologram at the third output angle towards the eye box, and wherein the reflection hologram structures comprise a second region having a third reflection hologram configured to diffract the light that was diffracted by the first transmission hologram at a fourth output angle towards the eye box and a fourth reflection hologram configured to diffract the light that was diffracted by the second transmission hologram at the fourth output angle towards the eye box.

9. The optical system defined in claim 1, wherein the first hologram structures comprise reflection hologram structures and wherein the second hologram structures comprise transmission hologram structures.

10. The optical system defined in claim 1, further comprising:

a substrate having opposing first and second surfaces, wherein the first hologram structures are mounted to the first surface and the second hologram structures are mounted to the second surface;

a first dielectric cover layer over the first hologram structures; and

a second dielectric cover layer over the second hologram structures.

11. The optical system defined in claim 1, wherein the first and second hologram structures each have a non-zero physical curvature and wherein the first hologram structures are located within 8 mm of the second hologram structures.

12. The optical system defined in claim 1, wherein the second hologram structures are provided with an optical power that configure the second hologram structures to mitigate aberrations associated with the display module.

13. The optical system defined in claim 12, wherein the first hologram structures are provided with an additional optical power that configure the first hologram structures to mitigate the aberrations associated with the display module.

14. The optical system defined in claim 12, wherein the second hologram structures are configured to provide more optical power to the replicated image light at a larger diffraction angle from the first hologram structures than to the replicated image light at a smaller diffraction angle from the first hologram structures.

15. The optical system defined in claim 1, wherein the first hologram structures comprise a first film having a first set of